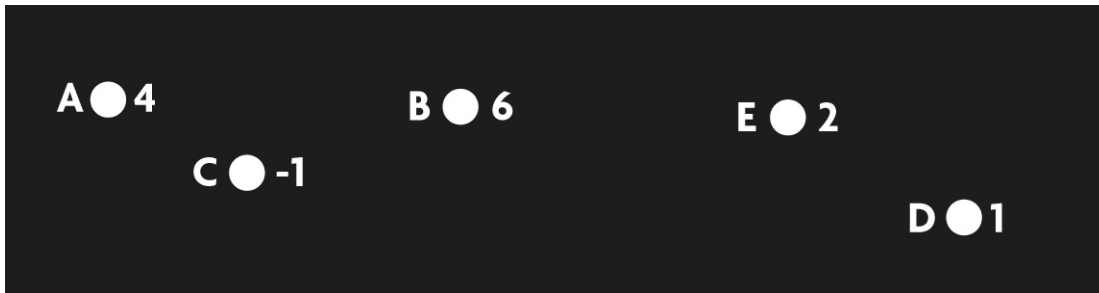


Astronomy Ranking Task: Apparent and Absolute Magnitude

Exercise #3

Description: The figure below shows five stars (A - E) as they appear in the night sky from Earth. The absolute magnitude number is also provided to the right of each star.



A. Ranking Instructions: Rank the brightness (from greatest to least) of each star (A – E) as it appears in the night sky.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the brightness of each star appears the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

B. Ranking Instructions: Rank the total amount of energy (from greatest to least) given off by each star (A – E).

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the total amount of energy given off by each star would be the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

C. Ranking Instructions: Rank the actual brightness or luminosity (from greatest to least) of each star (A – E).

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the actual brightness/luminosity of each star is the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

D. Ranking Instructions: Rank the absolute magnitude number (from greatest to least) of each star (A – E).

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the absolute magnitude number of each star would be the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

E. Ranking Instructions: Rank the distance (from farthest to closest) of each star (A – E) from Earth.

Ranking Order: Farthest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Closest

Or, the distance from Earth to each star is the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:
